Amendment to the Claims

Claims 1 – 13 (Cancelled).

14. (Currently amended) A method of measuring a blood flow rate, the method comprising:

(a) passing a guide wire through an indicator lumen in an elongate catheter body having a longitudinal axis to pass a portion of the guide wire through a terminal port of the indicator lumen;

(b) passing an indicator through the indicator lumen to pass from the elongate catheter body through the terminal port and an injection port located along the longitudinal axis intermediate the terminal port and a proximal end of the catheter body;

(c) calculating the blood flow rate as a function of a volume less than a total volume of the indicator passed through the indicator lumen.

Claim 15 (Cancelled).

16. (Previously presented) The method of Claim 14, further comprising passing the guide wire through a reduced cross sectional area of the indicator lumen.

17. (Previously presented) The method of Claim 14, further comprising passing the indicator through the indicator lumen to contact a portion of the guide wire.

18. (Previously presented) The method of Claim 14, further comprising passing the guide wire through a reduced cross sectional area of the indicator lumen to increase a flow of the indicator through the injection port.

19. (Previously presented) The method of Claim 14, wherein calculating the blood flow rate comprises compensating for a volume of the indicator passing through the terminal port.

20. (Previously presented) The method of Claim 14, wherein the calculated blood flow rate is described by a relationship $Q = \frac{k(T_{b-}T_i) \cdot V(1-a)}{S}$, where Q is the calculated blood flow rate, k is a coefficient related to thermal capacity of a measured flow and the indicator, T_b is a temperature of a measured flow prior to injection of the indicator, T_i is a temperature of the indicator prior to entering the measured flow, V is a volume of the indicator, S is an area under a temperature versus time curve resulting from a mixing of the indicator, and a is a portion of the indicator passing through the terminal port, the calculated blood flow rate being a value provided by an appropriate selection of k, T_b, T_i, V, S, and a.

21. (Withdrawn-Previously presented) The method of Claim 14, wherein calculating the blood flow rate comprises compensating for a thermal effect of the indicator passing through the terminal port.

22. (Withdrawn–Previously presented) The method of Claim 14, wherein calculating the blood flow rate comprises compensating for a thermal effect of the indicator passing through the terminal port corresponding to the relationship $Q = \frac{k(T_{b-}T_i)\cdot V(1-a)}{(S_m - S_{in})}$, where Q is a blood flow rate, k is a coefficient related to thermal capacity of a measured flow and the indicator, T_b is the temperature of the measured flow prior to injection, T_i is the temperature of the indicator prior to entering the measured flow, V is the volume of the indicator, S_m is the total area under the temperature versus time curve resulting from the mixing of the indicator, S_{in} is the part of the area under the dilution curve related to a cooling thermal change of a sensor inside the catheter body and a is the portion of the indicator passing through the terminal port, the calculated blood flow rate being a value provided by an appropriate selection of k, T_b, T_i, V, S_m, S_{in} and a.

Claims 23 – 27 (Cancelled).

28. (Currently amended) The method of Claim 14, further comprising sensing the indicator <u>along the longitudinal axis</u> intermediate the terminal port and the injection port.

29. (Currently amended) A method of measuring a blood flow rate, comprising:

(a) passing a guide wire through an indicator lumen in an elongate catheter body having a longitudinal axis to pass a portion of the guide wire through a terminal port of the indicator lumen;

(b) passing an indicator through the indicator lumen to pass from the elongate catheter body through the terminal port and an injection port intermediate the terminal port and a proximal end of the catheter body;

(c) sensing with a sensor the indicator at a location ~~that is proximal to~~ located along the longitudinal axis intermediate the terminal port and ~~distal to~~ the injection port; and

(d) calculating the blood flow rate based on passage of the indicator through the terminal port and the sensed indicator.

30. (Currently amended) A method of measuring a blood flow rate, the method comprising:

(a) passing a guide wire through an indicator lumen in an elongate catheter body having a longitudinal axis to pass a portion of the guide wire through a terminal port of the indicator lumen;

(b) passing an indicator through the indicator lumen to pass from the elongate catheter body through the terminal port and an injection port located along the longitudinal axis intermediate the terminal port and a proximal end of the catheter body;

(c) sensing with a sensor passage of the indicator in the blood flow along a length of the catheter; and

[[(c)]] (d) calculating the blood flow rate as a function of a volume less than a total volume of the indicator passed through the indicator lumen and the sensed indicator.

31. (Currently amended) The method of Claim 14, wherein calculating the blood flow rate includes ~~further including~~ quantifying a first amount of the indicator passing through the terminal port~~, and utilizing the quantified first amount in calculating the blood flow rate~~.